

WHEN SOS HALTS RADIO PROGRAMS

Special Operators on Watch for
Signals of Distress

WEAF and WJZ Keep Constantly
on Alert with Superheterodyne
Receivers.—Men on Duty Tell
Fans of Trouble and Sign Off.

BY AUSTIN C. LESCABOURA
Far out at sea a ship in distress sends out a feeble call for help. Another ship miles away, perhaps, picks up the message and relays it. A few minutes later the air has been cleared to make way for the S O S. All commercial code stations and broadcasting stations are silent.

When lives are in danger at sea, all transmission of business messages and entertainment must be suspended immediately to give precedence to the saving of lives. Of necessity, business transactions involving huge sums of money, experimental communication between amateurs and the presentation of entertainment to millions of persons must be sacrificed momentarily.

"S O S" Watch on Duty
The important job of silencing individual stations when an S O S is picked up, whether it comes directly from the ship calling for help or from a relaying ship, is performed by the men at the transmitters assigned to what is called the "S O S" watch. At the transmitters of two New York stations, WEAF at Belmont, L. I., and WJZ at Bound Brook, N. J., men are constantly on duty listening to everything to be heard on the 600-metre wave length.

Each station is provided with an especially sensitive superheterodyne receiving set, and as long as the station is on the air an operator, with headphones, is seated before it. For additional protection, powerful loud speakers also are connected with the receiver. All except the very feeblest code signals can be heard in any part of the room in which the speakers are situated.

Fans Told of Trouble
When an S O S is heard the operator on watch immediately leaves his post

OUR AUTO NUMBER FRAMES
"WILL BEAUTIFY YOUR CAR."
Made of heavy bronze, nickel plated
2834 \$5 pair
No charge for putting on.

J. M. BAKER PATTERNS CO.
114 WEST EXCHANGE ST. PROVIDENCE, R. I.

The Walter W. Massie
Radio Sales and
Service Bureau
16 Windsor Rd., Edgewood
Telephone Broad 6507

MASSIE SERVICE
"THE BIG 1/2"
We sell, service and repair
all standard makes of radio
apparatus.

The Only Rhode Island Owned Chain Grocery Stores
Nicholson, Thackray Co.

Good Groceries Since 1875

We Have Changed
Our Broadcasting Station

TUNE in on WJAR for Sally Sawyer's popular
talks Monday and Thursday mornings at 10:30.
OUR Home Sweet Home Orchestra will entertain you
from WJAR Wednesday evenings from 8 to 8:30.

Don't Forget to Turn Your Dial
to WJAR

Registering
A Great Hit!

The New 1929
Model 46—7-Tube

Atwater Kent
WITH DYNAMIC SPEAKER

Price complete, including tubes and speaker—**\$139**

Come In and See It!

R. I. ELECTRICAL EQUIPMENT CO.
"FIRST RADIO STORE IN PROVIDENCE"
45 Washington Street Phone Dexter 1052

and goes to a small control room. There he throws a switch, disconnecting the transmitter from the studios in New York, and opens a microphone at his side. The operator makes a brief announcement to the effect that he registers the interruption to the program, but the station is signing off for an S O S. Then he throws another switch that closes down the transmitter. All this is only a matter of seconds.

When the S O S is received, one of the two operators on duty at the transmitting station calls the main control room to announce that the station is off the air. If the interruption promises to be of long duration, purely local programs may be allowed to cease, but programs going out to the whole network must be kept up, for beyond the Atlantic seaboard broadcasting is going on as usual.

All Transmissions Cease
The man who was on watch has by this time finished shutting down the transmitter, and is calling the district communications superintendent to report that he has signed off the S O S and is ready to resume. Thereafter, he keeps in touch with the superintendent. The district communications superintendent at the same time is probably broadcasting from NAAH, the naval station, a general order to ship and shore radio stations, with the exception of those actually "working" the endangered ship, to close down.

Later, when the situation has been learned and aid has been dispatched, a "resume traffic" order will be sent out from NAAH. This permits all stations to begin work again. If it has been determined previously that broadcasting does not interfere with code messages to and from the ship calling for help, these stations will have been allowed to resume.

Operators Keep Record
As soon as the operators at the transmitters have been informed that all is clear, the transmitters are put in operation, the main control room is notified that the program is on the air again and announcements are sent out explaining why the stations were off the air.

Besides listening for S O S calls, the operators on watch must also keep a record of everything important they hear on the 600-metre wave and, with the aid of the supervising engineer, keep the transmitter functioning properly. Few accidents are likely to happen, but there is always a possibility that one of the huge vacuum tubes may burn out.

If only one of these "blows," the operator on watch can substitute another automatically, merely by pressing a button. On rare occasions, however, two tubes fail at the same time, and then the station goes off the air. All hands on duty jump to meet the emergency. Heavy wrenches wrest the dead tubes from the water jackets which surround them, and new ones are quickly and very carefully inserted in their places. In not more than three minutes the transmitter is back on the air.

The operators on watch also have another duty. Fifteen minutes before WEAF or WJZ is to go on the air, they must check up carefully to make sure that no silence has been imposed previously because of an S O S. Putting the station on the air in the midst of efforts to get in touch with a foundering ship, a time when seconds may count in saving hundreds of lives, might mean the loss of the last desperate signals.

Highest Highway Bridge.
What is said to be the highest highway bridge in the world is being completed in the famous Grand Canyon, some 100 miles north of Flagstaff, Ariz. The 830-foot span rests itself more than 450 feet above the waters of the Colorado river. The bridge will open up a territory little known to tourists and make more accessible such places of interest as Bryce Canyon, Zion National Park and the Kaibab national forest.

RADIO PROGRAMS

Continued from Page Seven.

6:20 p. m.—Theatre announcement.
6:30 p. m.—Weather report.
6:30 p. m.—Earls of Pawtucket—Community program.
7:30 p. m.—Jean Smith Fletcher, soloist.
8:00 p. m.—Correct time.
8:00 p. m.—Saturday.
10:00 a. m.—Musical period.
10:15 a. m.—Let's Make Believe.
11:00 a. m.—Staff pianist.
11:15 a. m.—Request hour.
12:45 a. m.—News bulletins.
12:50 a. m.—Correct time.
1:00 p. m.—Weather report.
1:30 p. m.—Stock quotations.
1:45 p. m.—Weather report.
2:00 p. m.—Studio program, arranged by Frank J. Gillis.
2:00 p. m.—Correct time.

OUT OF TOWN STATIONS To-Day

KDKA—PITTSBURGH—306
11:30 a. m.—Church service.
1:30 p. m.—Allegheny County Memorial Park program.
2:00 p. m.—Same as WJZ.
3:00 p. m.—Symphony concert.
4:00 p. m.—Organ recital.
4:45 a. m.—Service from Shadydale Presbyterian Church.
6:00 p. m.—William Penn Hotel Orchestra.
6:30 p. m.—Weather report.
7:00 p. m.—Service from Calvary Protestant Episcopal Church.
8:00 p. m.—Same as WJZ.
8:15 p. m.—Same as WJZ.
8:15 p. m.—Same as WJZ.
9:45 p. m.—Correct time.
10:15 p. m.—Correct time.

WBAB—NEW YORK—349
10:00 a. m.—Children's hour.
11:00 a. m.—West End Presbyterian Church service.
12:30 p. m.—Jewish day musical program.
1:45 p. m.—Three Little Sacks sketches.
2:15 p. m.—Shubert string quartet.
2:45 p. m.—Richard Kenyon.
3:00 p. m.—Symphony hour.
4:00 p. m.—Cathedral hour.
5:00 p. m.—French trio and tenor soloist.
5:30 p. m.—Finkenberg musical program.
6:00 p. m.—Henry Soman and his Roosevelt ensemble.
8:00 p. m.—Around the Samovar.
8:30 p. m.—La Palina musical.
9:00 p. m.—Majestic Theatre of the air.
10:00 p. m.—DeForest auditions.
11:00 p. m.—Dave Brothers collegians.

WBAL—BALTIMORE—283
12:30 p. m.—Spring quartet.
1:30 p. m.—Same as WJZ.
2:00 p. m.—Same as WJZ.
3:00 p. m.—Same as WJZ.
5:00 p. m.—Uncle Ed and his dream children.
5:30 p. m.—National religious service.
6:30 p. m.—Same as WJZ.
7:00 p. m.—Kirk silver hour.
8:00 p. m.—Same as WJZ.
8:15 p. m.—Same as WJZ.
9:45 p. m.—Evening reveries.

WBSO—RADSON PARK—384
12:00 p. m.—Midnight ministry.

WBZ—SPRINGFIELD—303
10:45 a. m.—Service from South Congregational Church.
1:30 p. m.—Organ recital.
2:00 p. m.—Same as WJZ.
3:00 p. m.—People's Symphony Orchestra.
4:30 p. m.—Dr. Robert Ogden—Children's Hospital.
4:45 p. m.—"Noise," Capt. Percy R. Creed.
5:30 p. m.—Weather report.
5:30 p. m.—Same as WJZ.
6:00 p. m.—Same as WJZ.
6:30 p. m.—Sessions chimes.
7:00 p. m.—Piano recital.
7:25 p. m.—World bookman.
7:30 p. m.—Doris Kreinin, violinist, and Leon Vartianian, pianist.
8:00 p. m.—Same as WJZ.
8:15 p. m.—Same as WJZ.
9:15 p. m.—Michael Aher, baritone, and Stanley Benson, violinist.
9:45 p. m.—Same as WJZ.

WEAF—NEW YORK—434
12:30 p. m.—Sylvester hour.
1:30 p. m.—Same as WJAR.
2:00 p. m.—Biblical drama, "Queen of Sheba."
2:30 p. m.—Frances Papette, mezzo-soprano.
3:00 p. m.—Same as WJAR.
4:00 p. m.—Same as WJAR.
4:30 p. m.—Same as WJAR.
5:00 p. m.—Summary of programs.
6:00 p. m.—Same as WJAR.
6:30 p. m.—Same as WJAR.
7:00 p. m.—Same as WJAR.
7:30 p. m.—Same as WJAR.
8:00 p. m.—Sunday night talk by W. S. Packer.
9:10 p. m.—Lovell and Covel masterpiece pianist.
9:15 p. m.—Same as WEAF.
10:15 p. m.—News dispatches.

WFI—PHILADELPHIA—336
4:30 p. m.—Vesper service from the Second Presbyterian Church.
6:00 p. m.—Same as WJAR.
6:30 p. m.—Same as WJAR.
7:00 p. m.—Same as WJAR.
7:30 p. m.—Service from the Arch Street Presbyterian Church.
9:15 p. m.—Same as WEAF.
9:15 p. m.—Same as WEAF.
10:15 p. m.—Same as WEAF.

WGDS—NEW YORK—254
1:30 p. m.—Scholom Aitchem, Jewish musical program.
2:30 p. m.—Symphony, Rhyme and Music.
3:00 p. m.—Ethel Johnson, soprano; Albert Rosenthal, cellist.
3:30 p. m.—The Madrigals, ballad recital.
4:00 p. m.—William Bayliss and orchestra.
5:00 p. m.—Newscasting and music.
5:15 p. m.—Studio specialties.

WGB—BUFFALO—345
10:45 a. m.—Service from Westminster Presbyterian Church.
12:00 p. m.—Correct time and weather.
1:30 p. m.—Same as WJAR.
2:30 p. m.—Dorothy Wilkes, concert pianist.
3:00 p. m.—Same as WJAR.
4:00 p. m.—Same as WJAR.
5:00 p. m.—Same as WEAF.
6:00 p. m.—Same as WJAR.
7:00 p. m.—Same as WJAR.
7:45 p. m.—Service from Central Presbyterian Church.
9:00 p. m.—Same as WJAR.
9:00 p. m.—Same as WJAR.
9:15 p. m.—Same as WEAF.

WGV—SCHENECTADY—280
11:00 a. m.—Service from State Street Presbyterian Church.
1:30 p. m.—Same as WJAR.
3:30 p. m.—Organ recital.
4:00 p. m.—Same as WJAR.
5:30 p. m.—Arcade Madrigals, violinist.
6:00 p. m.—Same as WJAR.
6:30 p. m.—Same as WJAR.
7:00 p. m.—Same as WJAR.
7:30 p. m.—Same as WJAR.
8:00 p. m.—Same as WEAF.
9:15 p. m.—Same as WEAF.

WHAM—ROCHESTER—361
10:30 a. m.—Morning church service.
3:15 p. m.—Unity Home of Truth service.
4:00 p. m.—Back to melody.
5:00 p. m.—Same as WJZ.
5:30 p. m.—Same as WJZ.
6:00 p. m.—Correct time.
6:30 p. m.—Same as WJZ.
7:00 p. m.—Same as WJZ.
8:00 p. m.—Same as WJZ.
8:15 p. m.—Same as WJZ.
9:15 p. m.—Same as WJZ.
9:45 p. m.—Same as WJZ.
10:15 p. m.—Weather forecast.

WHAP—NEW YORK—231
9:00 p. m.—Service from Westminster Presbyterian Church.
9:15 p. m.—Christian Science reading from the writings of Mary Baker Eddy.

9:40 p. m.—Christian Science reading from the writings of Augusta E. Sletson, C. S. D.

WICC—BRIDGEPORT—216
8:30 a. m.—Sabbath school.
8:35 a. m.—Radio program morning news.
9:00 a. m.—Sunday breakfast recitals.
9:45 a. m.—Mother Thrift Club music.
10:00 a. m.—Service from Park Street Congregational Church.
10:50 a. m.—Hallmarks of WICC.
1:00 p. m.—Ted Smith's Orchestra.
2:00 p. m.—International Bible students' program.
2:30 p. m.—Al Baben's novelty trio.
3:00 p. m.—Josephine Basso in ballads.
3:15 p. m.—Two Perry band boys.
3:30 p. m.—National Council of Catholic men.
4:00 p. m.—Prof. Precaccini's musical novelty.
6:00 p. m.—Correct time.

WIP—PHILADELPHIA—402
10:45 a. m.—Service from the Holy Trinity Church.
12:30 p. m.—International Bible students' program.
10:00 p. m.—Instrumental quintet.

WJZ—NEW YORK—395
9:00 a. m.—Children's hour.
12:30 p. m.—String quartet.
1:00 p. m.—National artists' hour.
2:00 p. m.—Roxsy symphony concert.
3:00 p. m.—Young People's Conference.
4:00 p. m.—Cook's travelogue.
5:00 p. m.—Summary of programs.
5:25 p. m.—Dr. Harry Emerson Fosdick.
6:30 p. m.—Whitall Anglo-Persians.
7:00 p. m.—Correct time.
7:30 p. m.—Fragments of fancy.
8:00 p. m.—Etna Jettick melodies.
8:15 p. m.—Collier's radio orchestra.
9:15 p. m.—Utica jubilee singers.
9:45 p. m.—El Tango Romantic.
10:15 p. m.—Correct time.
10:45 p. m.—Lew White organ recital.

WLVI—NEW YORK—273
3:15 p. m.—Columbus Council, K. of G. Drum.
8:00 p. m.—Service from Paulist Fathers' Church.
WOR—NEWARK—422
2:00 p. m.—"Lawyers' Air Magazine."
2:30 p. m.—Selbert's Cusiatics.
3:00 p. m.—Philharmonic Symphony Orchestra.
4:15 p. m.—Studio recital.
5:15 p. m.—Sunday forum.
6:00 p. m.—Great Cathedral.
7:00 p. m.—Ruth Taylor's radio orchestra.
7:30 p. m.—Vetov's concert orchestra.
8:30 p. m.—Choir invisible.
9:00 p. m.—Market and Halsey street playhouse.
10:30 p. m.—Pipe dreams.

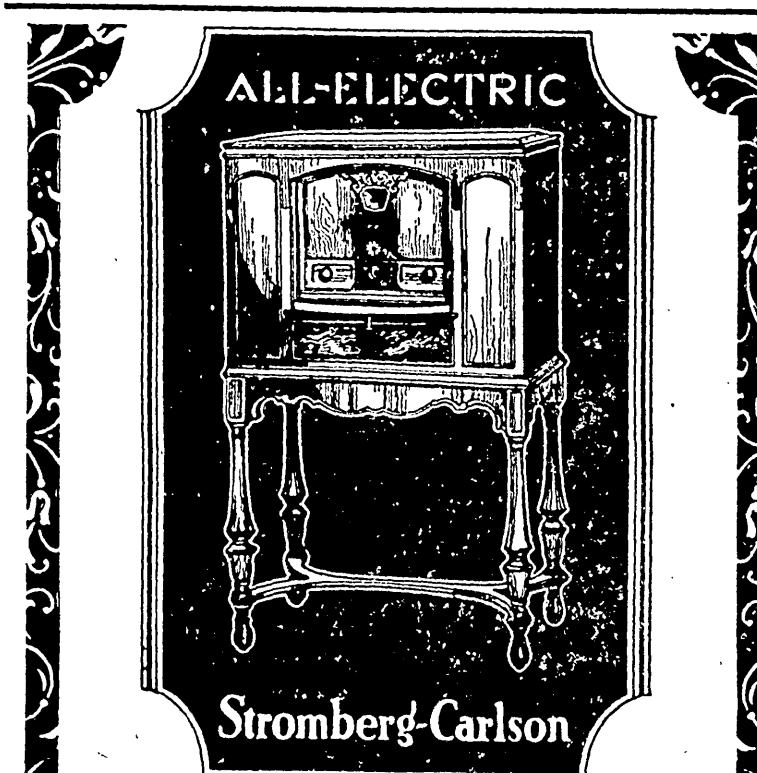
WTAG—WORCESTER—517
1:30 p. m.—Same as WJAR.
2:00 p. m.—Same as WEAF.
2:30 p. m.—Same as WEAF.
3:00 p. m.—Same as WJAR.
4:00 p. m.—Same as WJAR.
4:30 p. m.—Same as WJAR.
5:00 p. m.—Same as WJAR.
6:00 p. m.—Same as WJAR.
6:30 p. m.—Same as WJAR.
7:00 p. m.—Same as WJAR.
7:30 p. m.—Same as WJAR.
8:30 p. m.—Same as WJAR.
9:00 p. m.—Same as WJAR.
9:15 p. m.—Correct time and news bulletin.

WTIC—HARTFORD—500
1:30 p. m.—Same as WJAR.
2:00 p. m.—Same as WEAF.
2:30 p. m.—Same as WEAF.
3:00 p. m.—Same as WJAR.
4:00 p. m.—Same as WJAR.
4:30 p. m.—Same as WJAR.
5:00 p. m.—Same as WJAR.
6:00 p. m.—Same as WJAR.
6:30 p. m.—Same as WJAR.
7:00 p. m.—Same as WJAR.
7:30 p. m.—Same as WJAR.
8:30 p. m.—Same as WJAR.
9:00 p. m.—Same as WJAR.
9:15 p. m.—Correct time and news bulletin.

Interference Filters.
If your radio set happens to be near a machine shop or electric elevator or is bothered every time you run your electric sewing machine or electric refrigerator, you can greatly reduce the noises by obtaining a device known as an interference filter. It is simply connected between your set and the lighting socket and has a special internal circuit, a portion of which is connected by an external binding post and wire to the ground.

Note on Impedance.
Here is an easy way to classify the matter of impedance: Those who have studied the theory of radio at all know that impedance is a form of resistance. When they speak of "matching" impedances, they mean "matching" resistances. But the conception is far from clear. Remember that "impedance" is to alternating current what "resistance" is to direct current.

Speaking of Saturation
It is interesting to observe that the largest field of sales of radio receivers to new owners is in those States where already there are the greatest number of receivers. The smallest market is in a State where there are the least number of receivers in use.



No. 636, Price, less tubes and Speaker \$245

Noteworthy in Radio

Tonal Excellence—that fidelity of reproduction which has always been the distinguishing mark of Stromberg-Carlson Receivers.

Selective—separates stations readily even in areas crowded with broadcasting.

Sensitive—brings in distant programs, even from stations in the high wave channels, which are given extra power.

Balanced—through the use of the Hazeltine patents and total shielding.

Two-fold Entertainment—plays records electrically through the Receiver's audio system, with phonograph and magnetic pick-up.

Handsome—cabinet low and graceful, following the modern trend in home decoration.

Arrange for a demonstration in your own home.

M. STEINERT & SONS
STEINERT BLDG.
495 Washington Street

TEST C BATTERIES

Though Small, These Units Are Vital to Good Results.

The C battery in the radio set is not called upon to deliver any appreciable amount of current—just to "charge" the grid circuits of our tubes negatively. But batteries lose their strength simply standing and C batteries should not be retained when their voltages drop below normal. Not only does the battery then fail to charge the grid circuits efficiently, but in addition the chemical action common to decaying batteries will cause a gradual increase in "noises" in the set. So have a simple voltmeter on hand and give the C batteries the "once-over" now and then. C batteries are very cheap, considering the extra cost we'd be put to in tube life and B current if we didn't have them!

ANSWERS TO RADIO TEST

1. Noises that are created by power lines, transformers, electric switches, electrical devices and other near-by receptacles.
2. It depends upon conditions surrounding the receiver.
3. Loss of selectivity.

Moving Parts of Set

The only parts that are adjusted or moved in the operation of the receiver are the variable tuning condensers and the volume control, and these are so constructed that with ordinary usage they will last for years.

Power for Tubes

An old tube will not glow unless more than normal voltage is applied. New tubes usually require about 135 volts to start to glow. An old tube may require 140 volts. The starting point for the glow varies slightly with individual tubes.

Marshall & Co.

Authorized Radio Service
Where We Sell the New
R-A-D-I-O Exclusively
94 DORRANCE STREET
Opp. Northwinds Hotel

I Am Prepared to
Demonstrate All
**BREMER-TULLY
MODELS**

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RADIO CO.**
HOXSIE

Bremer-Tully

Unexcelled Radio

for quality of reproduction, sensitivity and selectivity. Six, seven and eight tube sets on display. Demonstration Free.

SERVICE SPECIALIST

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Studio**
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Vagrant Waves of Interest to Fans

Any large metal object or structure will serve as an antenna, provided it is not directly grounded.

Never try to adjust the intricate mechanism of a loud-speaker if the tone quality is good.

The average cost of operating an electric radio is said to amount to about three-tenths of a cent an hour.

Station KMOX, which will be built

in St. Louis, Mo., is to have a 50,000-watt transmitter. This is the maximum power allocated to any station in the United States.

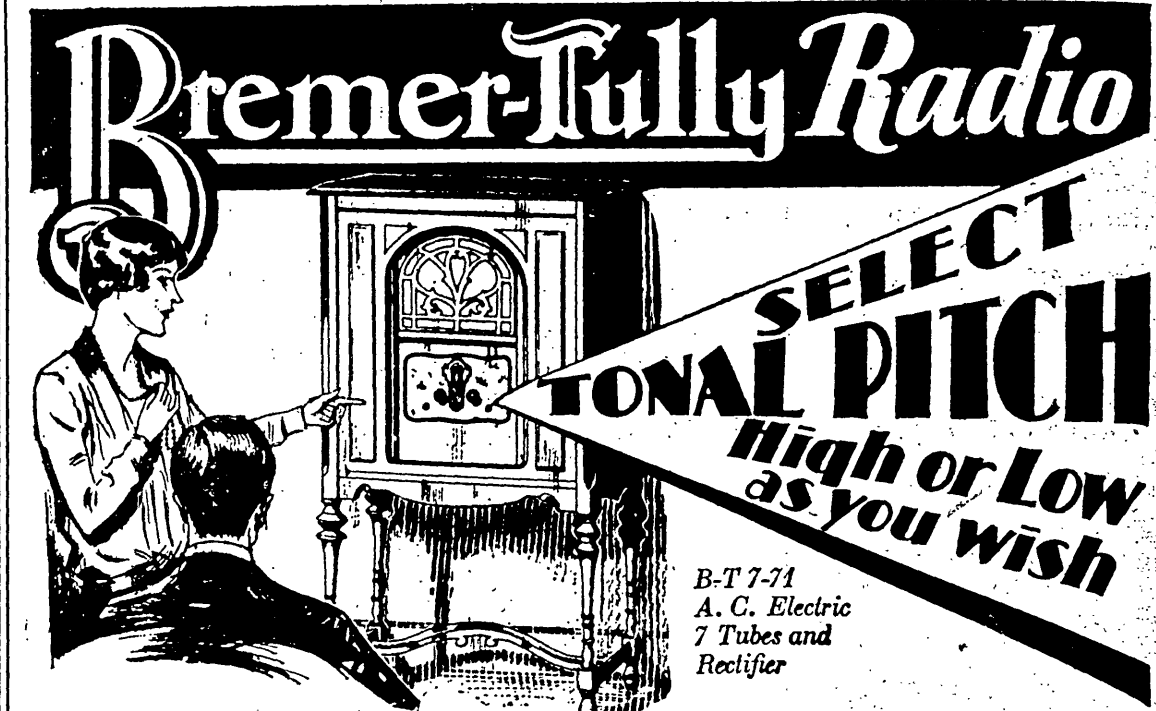
One of the most powerful broadcasting stations in Europe, capable of reaching the United States, will be constructed soon in Rome.

According to a radio survey made in Chicago, broadcasts of sports events and musical programs are far superior to all others in their appeal to listeners in that section of the country.

Radio, experts of the Bureau of Standards, Washington, are perfecting receiving sets especially adapted for combined radio beacon and telephone use aboard commercial aircraft. The apparatus must be of small weight and size, as well as high sensitivity and selectivity.

We Are Prepared to
Demonstrate All
**BREMER-TULLY
MODELS**

Marshall & Company
94 DORRANCE STREET
Phone Gaspee 8519



PRICE COMPLETE \$304.50

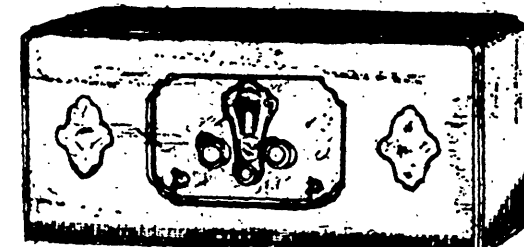
All Bremer-Tully sets are noted for their fine tone quality, but there is an exclusive Bremer-Tully feature—Turn the switch and presto! tone to suit your individual taste.

**Extremely Selective Great for Distance Getting
Simple to Operate**

Price of this beautiful Model 71 Console, complete with Dynamic Speaker and Tubes, \$304.50.

A most exquisite piece of furniture.

**MODEL
70**



**MODEL
70**

PRICE \$150

(without speaker or tubes)

**MODEL
70**

Attractive price makes this set the most popular product of the Bremer-Tully Mfg. Co., after eight years manufacturing Radio. Only recently enlarged factory facilities have made it wise to advertise this model. This table model has all the exclusive features of the 71 Console.

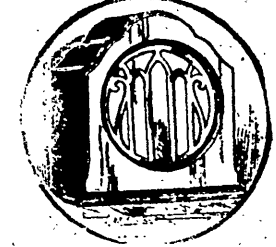
PRICE \$150 (without speaker or tubes)

**There Are Six
Bremer-Tully Models**

B-T 6-40, six tubes \$115
B-T 7-70, seven tubes \$150
B-T 8-20, Rejactor stage, eight tubes \$230
B-T 7-71D, seven tube; Dynamic Speaker \$280
B-T 8-21, eight tubes, Dynamic Speaker, Phonograph Connection \$375
B-T 8-22, eight tubes, Phonograph Combination \$490

Prices are without tubes.

Have you heard a
Bremer-Tully Speaker?



Magnetic Type \$30.00
Dynamic Type \$50 and \$65.

Young, Leonard & Harrall Company
Exclusive Wholesale Distributors
Rhode Island, Eastern Connecticut and Bristol County, Mass.
52 PINE STREET PROVIDENCE



Bremer-Tully

The Outstanding Radio of the Day

May be Purchased on Convenient Terms

This new model 71 seven-tube Bremer-Tully Radio with built-in Dynamic Speaker has set an entirely new standard. **\$304.50** Complete

MAY WE DEMONSTRATE

AVERY PIANO STORE

Radio Department
256 Weybosset Street Providence, R. I.
E. R. Folli, Managing Proprietor of Radio Department